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AUTHOR Priese, Diane
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ABSTRACT

A study was undertaken in rural areas of Nova Scotia, Prince Edwards Island, and Newfoundland, Canada, to investigate public library bookmobile services in comparison to book-by-mail service. A cost/benefit analysis was done with cost data taken from accounting information and benefits information derived from a questionnaire completed by library service users. Results showed that bookmobile services have the potential for a far greater variety and quality of service. (EMH)

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EVALUATION OF PUBLIC LIBRARY BOOKMOBILE SERVICE
IN RURAL AREAS
IN COMPARISON TO
A BOOKS-BY-MAIL SERVICE

Independent Study

by

Diane Friese

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School of Library and Information Science
University of Western Ontario
London, Ontario
Canada

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I. INTRODUCTION TO COST-BENEFIT ANALYSIS IN PUBLIC LIBRARIES

Cost-Benefit (C/B) analysis is a technique which is a helpful guide in making decisions on measuring library benefits (output) in comparison to costs (input, resources used) and alternative services sacrificed. C/B analysis is an information gathering process devised to provide feedback on the efficiency and effectiveness of a particular library service.

"An economist would view a library as a business, (although non-profit) in that it supplies particular services in response to demands for these services. Libraries use inputs/resources such as labor, physical facilities, books and other materials. Libraries produce outputs of educational, informational, recreational and cultural services. An economist would determine if the inputs were efficient. Efficient public policy requires that the benefits from library services exceed the costs of providing these services. A comparison of benefits and costs is therefore essential for prudent public expenditure policy."

Efficient resource allocation can only exist if a library is aware of which services or activities yield the highest return for its limited resources.

In order to apply cost-benefit analysis to a public library, a library must first establish a set of objectives. The objectives must be established on a priority scale according to the needs of the library users. The objectives of public libraries are often vague, nebulous or over-generalized, making it difficult to establish any concise listing of priorities. Application of cost-benefit analysis is more effective when applied to a limited area, such as one public library or one component such as a bookmobile service. The objectives and parameters of a smaller unit are easier to identify than a larger unit. A smaller unit does allow for easier collection of costs and benefits data and offers a limited range of services in response to the objectives of the library and the needs of the users.

Measurement of costs is easier than measurement of benefits because: cost data is more available; cost statistics have a common denominator—money, and therefore are measured directly from resources bought in the private business

Objective of Study

This study was initiated to investigate public library bookmobile services in rural areas in comparison to alternatives such as a books-by-mail service. Nova Scotia, Prince Edward Island and Newfoundland were the sample areas to which the questionnaire concerning bookmobiles was directed. (See Appendix B) There was no book-by-mail questionnaire implemented as emphasis was on the mobile units. Cost/benefit analysis was the measure of performance used to help evaluate these services.

This study is divided into the following 5 sections:

- I. Introduction to cost/benefit analysis in public libraries
- II. Cost/benefit analysis applied to rural bookmobiles
- III. Questionnaire design and results
- IV. Cost/benefit analysis applied to books-by-mail service
- V. Comparison and conclusions of bookmobile and books-by-mail services in rural areas

market; and public budgets for expenditures are carefully scrutinized and therefore include detailed and complete data. Costs must be measured in relationship to service and the resultant benefits, and here often lies a deficiency. Few statistics exist on how inputs/resources are used. Also, it is important to allocate resources to the proper services of a library and to convincingly argue for allocation of funds to a particular service. Statistics on how inputs are used would be invaluable for this argument..

Measurement of benefits is far more difficult than measurement of costs because of the subjective, intangible nature of library service benefits. The following contribute to this difficulty:²

1. apparent lack of quantifiable objectives & measures of performance
2. need for a priority scale for all objectives and socio-economic sub-groups of library users
3. absence of monetary charges for services offered make it difficult to estimate a monetary value as seen by users of these services and results in difficulty in finding a common denominator for benefits to compare with costs
4. benefits of public libraries cannot be evaluated independently of costs and benefits of school libraries when both are inter-dependent and rely on the same community for public funding
5. lack of weighing scales to measure public benefits in relation to private benefits.. Is providing of leisure-time reading materials(private benefits the most efficient and important use for public library resources when educational material upgrades a person and therefore upgrades the community?)

It is important to identify users of library services before describing the benefits resulting from these services. Benefits in public libraries can be divided into various user groups. In general these could be: a. service to youth and school-age children and b. service to adults. Each of these sub-divisions can be divided into the four major types of public library benefits: educational, informational, recreational and cultural. The users of a library could also be divided into smaller socio-economic or occupational groups. i.e.

1. housewives/househusbands
2. students
3. businesspersons (white collar)
4. blue-collar workers
5. retired

It is significant to know the distribution of benefits from service offered among the various library user groups and what use of the services is made by each group.³ Traditionally, the aim of the public library has been to service everyone

or a broad cross-section of the community. But many studies have shown⁴, that the majority of public library users are from better-educated, middle-class groups and often 75% of these users are children. Does this make one of the major objectives of public library service an educational one? Is it justified to provide services primarily to middle-class users who are already culturally advantaged? These are the kinds of questions and conflicting objectives which arise when trying to determine the benefits of a public library service(s).

Better techniques need to be devised to measure the use of inputs by the various library user groups. Too frequently, circulation and registration figures are the only indicators used in determining the benefits of a public library service. Over emphasis on a single service (i.e. circulation of materials) can not describe in detail: the total services the library offers, the types of user services and the costs and benefits of those services in relationship to the costs and benefits of alternative services not offered.

II. COST-BENEFIT ANALYSIS APPLIED TO RURAL PUBLIC LIBRARY BOOKMOBILE SERVICE

A rural bookmobile library service is a smaller-sized unit in comparison to the public library as a whole. The bookmobile has a limited amount of resources available, has a geographically defined community of users whom it services, and can succinctly specify objectives of its service in contrast to the often vague objectives of public libraries as a whole. Therefore, evaluation of a rural bookmobile service, in my opinion, naturally lends itself to cost-benefit analysis, whether it takes place prior or during implementation of the service.

The objectives of a rural bookmobile service vary according to the particular library involved. (see p.14 , Section D, question 1) In addition, the objectives of a bookmobile service specified by librarians and the actual services and benefits provided according to user studies, may indicate a conflict of purpose. A user/non-user survey also provides concrete evidence of services provided and prevents any possible exaggeration by librarians of these services offered. However, both the opinions of the librarians and the results of a user/non-user survey must be considered when determining the objectives of the bookmobile.

Because of time and geographical limitations, I was unable to initiate a user/non-user survey prior to my bookmobile survey. However, this is a very important component of evaluating a rural bookmobile service. One must know the users and

the various communities serviced in order to carry the appropriate materials on the bookmobile and provide the needed services. Most bookmobile staffs become extremely familiar with those people who use the bookmobile and therefore are aware of their needs. But I would question to what extent they know the non-user population and the reasons why these people do not use the bookmobile service.

Rural bookmobile services are faced with many problems that urban bookmobiles do not encounter. Rural bookmobiles have considerably further distances to travel to circulate and provide services to the same number of users that an urban bookmobile can reach in a very few miles. Rural bookmobiles must continue to reach more users. This is a difficult task, particularly when trying to establish stops that reach more than two or three families at one time. It should be emphasized that bookmobile stops should not be judged entirely by the number of patrons it serves at each stop. The quality and type of services must always be considered.

Benefits of a rural bookmobile can be determined by both a user/non-user survey and by the observations of the staff on the bookmobile. These benefits again vary according to the particular community of users and should be compared to the objectives a particular bookmobile has established.

The service a bookmobile provides should always be in direct relationship to the user needs, taking into consideration the limitations of the physical capacity of the vehicle, bookstock and funding presently allocated to this service. The following are some of the services a rural bookmobile can provide:

1. messenger service to isolated areas
 2. delivery service of books to handicapped and ill
 3. help in emergencies
 4. referral service
 5. reference, information service
 6. source of reading materials
 7. educational service - stopping at schools
 8. multi-media centre
 9. public relations for library system
 10. services to elderly
- social service functions

A bookmobile librarian must establish by means of a priority list what objectives and services are the most desirable. It is important to determine these priorities before evaluating the service. Also, long-range and/or short-range objectives must be clearly determined.

The cost analysis of a rural bookmobile service can be detailed or simple depending upon the data available and the method used in measuring bookmobile service. Often, a rural bookmobile's budget is not a separate enumerated budget apart from other services of the library, which further complicates any analysis of costs. (see questionnaire results, p. 13) In general the following four areas arise:⁵

1. Physical automotive maintenance -
this includes: cost of vehicle, licensing, insurance, repairs, tires, washing, garage, depreciation, maintenance, staff costs
2. Books and other materials -
this includes: books, periodicals, non-print, binding & repair, office supplies, additional equipment
3. Operating expense
this includes: rent, utilities, publicity, travel expenses
4. Personnel
this includes: salaries of all full and part-time staff, including office if any

Some budgets will also be divided into fixed costs and variable costs. "Fixed costs include those which will apply regardless of amount of use--license fee, insurance, retirement, social security. Variable costs could include--gasoline, oil, repairs, tires."⁶

One method of cost measurement is by collecting costs for each of the above categories, totalling all categories and then dividing by the total circulation of materials on the bookmobile for one year. This would provide an average cost-per-book circulated. Such a comparison does not however, take into consideration the difference in quality of service which may vary according to personnel, frequency of stops, book capacity and miles covered each year. (see questionnaire results, p.13)

Depreciation of bookstock is a relatively new variable for librarians to consider and could be included in category number two above. It is difficult to estimate the obsolescence and decline in usefulness of books. The physical deterioration of materials on bookmobiles is an important factor to consider. For example, the physical deterioration of paperbacks on bookmobiles is much higher than in other areas of a public library. Depending upon the proportion of paperbacks a bookmobile carries, an appropriate adjustment would have to be made on the depreciation value of these paperbacks.

The cost of the first year of service often will be higher due to the purchase of the physical unit and initial outlay for books and materials, even if costs are pro-rated over several years. The kind of bookmobile purchased is also an added variable. "A 4000-book capacity bookmobile will not cost twice as much as a 2,000-book capacity vehicle and will give much better service for money invested. Although the initial cost of a 2,000-book capacity vehicle would be less, in the long range plans, it would be poor economy to purchase a smaller unit."⁷

To reiterate, cost analysis should not be considered without relationship to the kind and quality of services offered and benefits accrued from the bookmobile service. Cost-benefit analysis can help librarians clearly define the objectives of a rural bookmobile service and realize the actual benefits and costs of this service.

III QUESTIONNAIRE DESIGN AND RESULTS

This questionnaire was directed to bookmobiles which service a population of 1,000 or less in each community. The 1971 Canadian Census defined urban population as:

"All persons living in incorporated cities, towns, and villages with a population of 1,000 and over, as well as in unincorporated places of 1,000 and over having a population density of at least 1,000 square miles. Also considered urban were the built-up fringes of these cities, towns and villages if they met the same criteria of population and density. All the remaining population is classified as rural."

The 1971 percentage of population classified as rural, non-farm and rural farm is:

	Rural non-farm	%	Farm	%
Newfoundland	281,778	44.9	4,525	0.9
PEI	47,725	42.7	21,130	18.9
Nova Scotia	315,290	40.0	26,270	3.3

Rural farm is defined for census purposes as: "those persons living in rural areas on an agricultural holding of one or more acres with sales of agricultural products⁸ accounting to \$50.00 or more in the previous year."

The 1971 Census⁹ also estimated the following population breakdown for all of Canada:

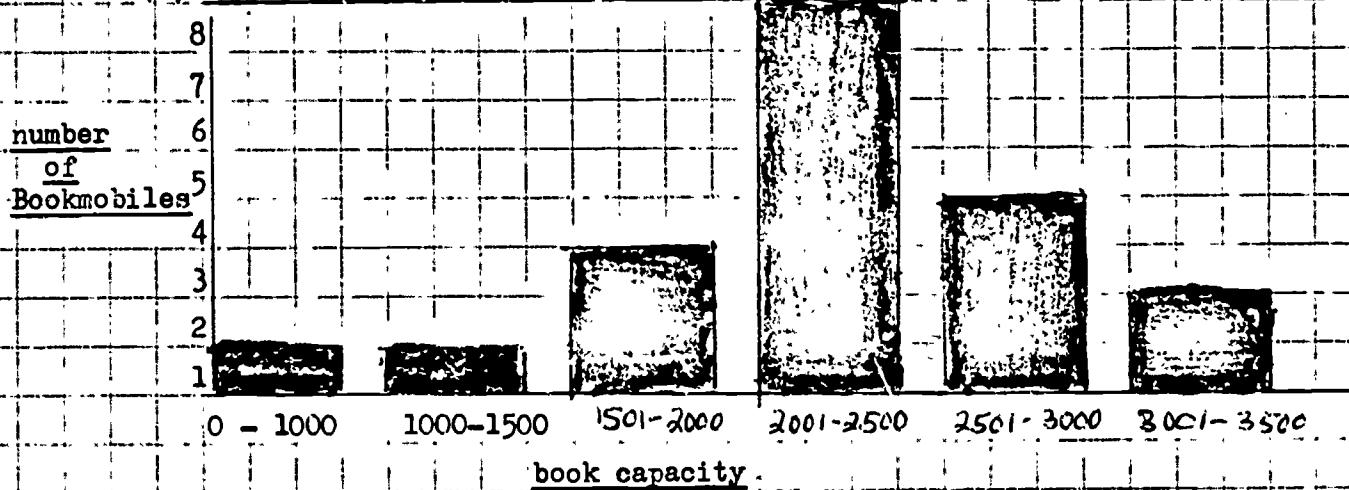
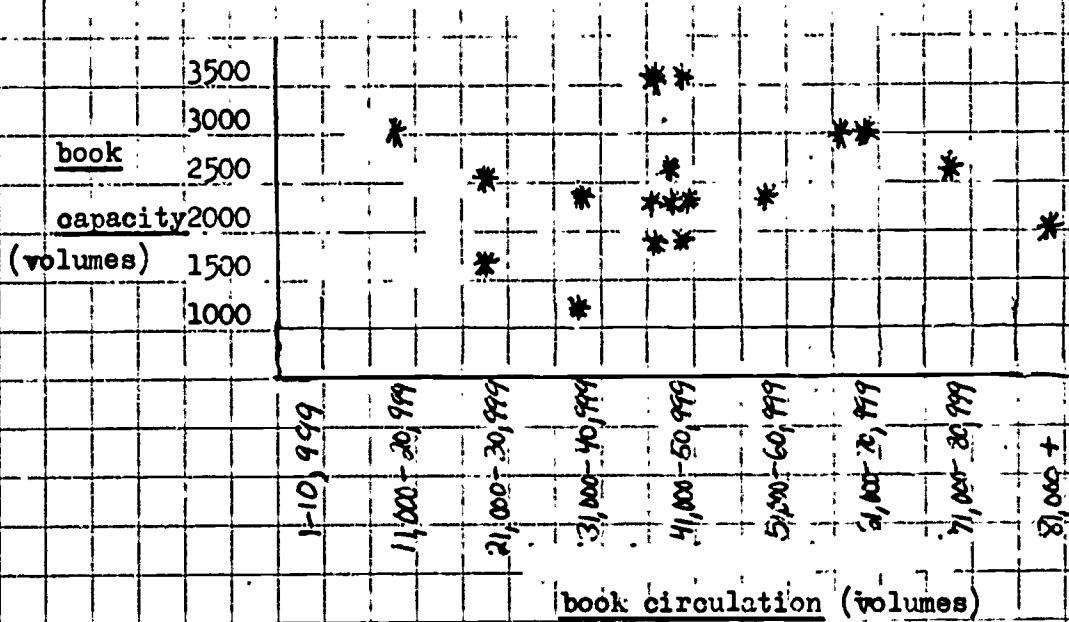
20,000,000	Total
5,288,121	rural
14,426,759	urban

Of the three Maritime provinces included in my study, PEI had the highest proportion of rural population, estimated by the 1974 Canada Yearbook at 62%.

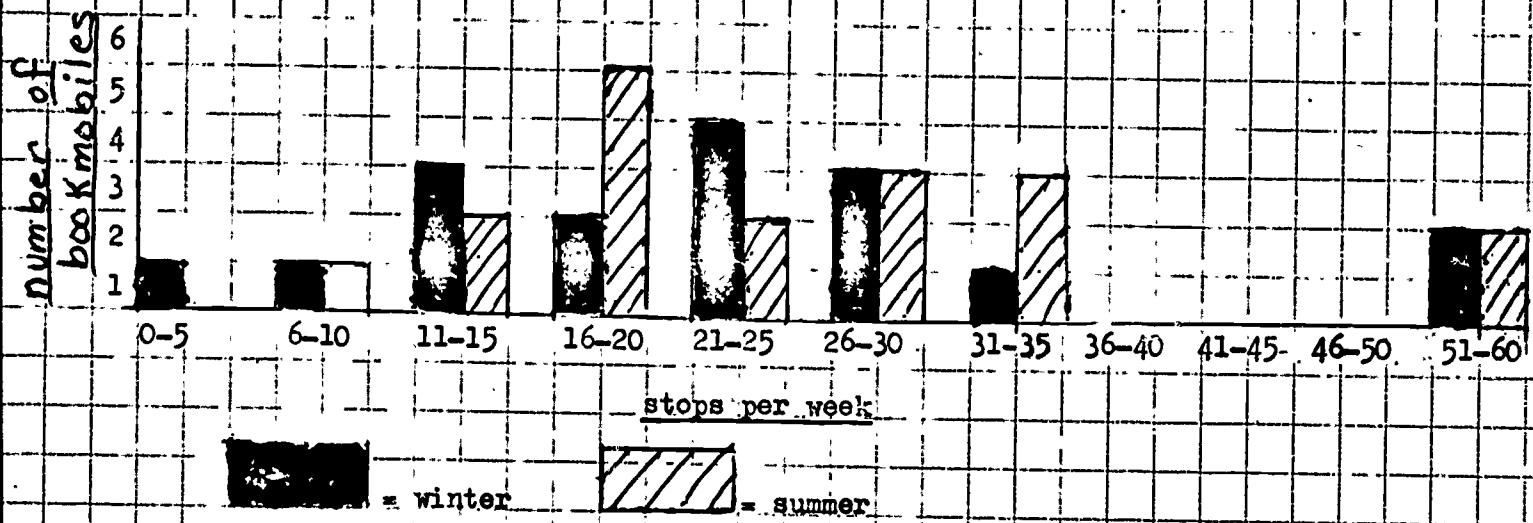
All these figures indicate that rural areas are a sizeable proportion of the population areas needing library services in Canada as a whole and particularly in Newfoundland, PEI and Nova Scotia. It is in these areas that little research has been undertaken to determine the best methods of library service. Bookmobiles have been the traditional method employed and more recently books-by-mail programs. The questionnaire was designed to provide data on how these bookmobiles are used and the costs of operating these services. The following data on pages 8-15 summarizes these results. (see appendix A, for copy of questionnaire sent)

Questionnaire ResultsSECTION A : General Statistics and Description

2. Location & number of questionnaires returned: PEI = 2; Nova Scotia = 13;
Newfoundland = 3; Total = 18 out of 25 sent 72% return
3. All bookmobiles were self-powered units.
4. (a) All boo'mobiles were relatively new. Two were 1967 units, the oldest.
Two were 1975 units, the newest.

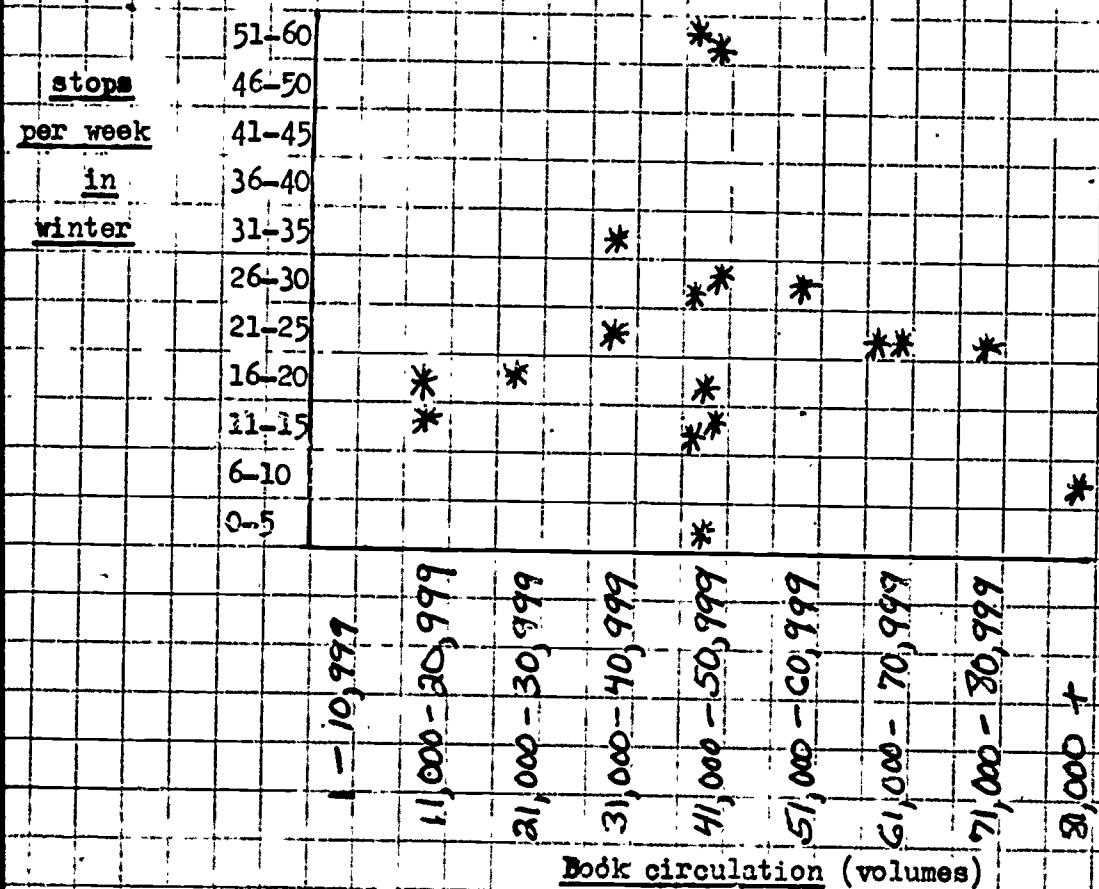
(b) Total book capacity of mobile unitsCorrelation of book capacity and total annual book circulation

5. Average number of stops per week in winter and summer



50% of bookmobiles have the same number of stops in winter and summer

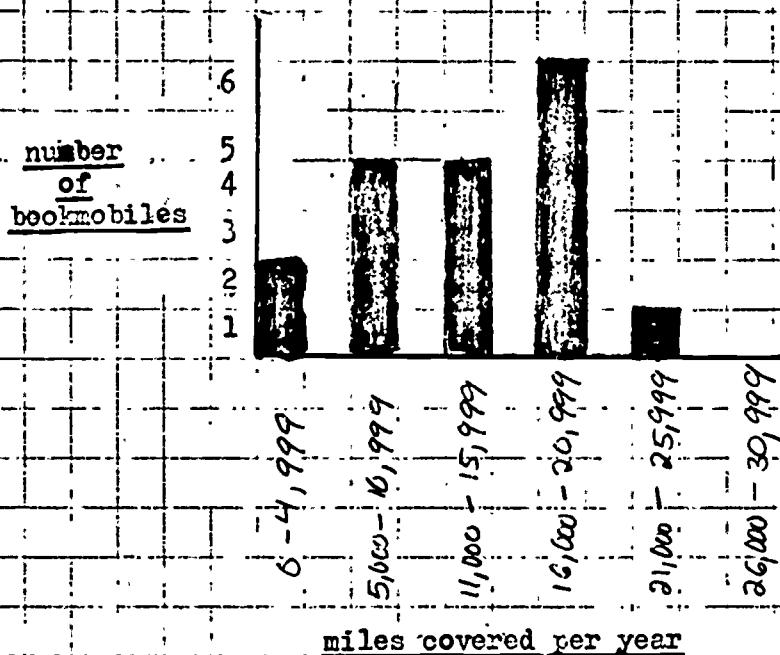
Correlation between number of stops per week in winter and total book circulation per year



SECTION A (con't)

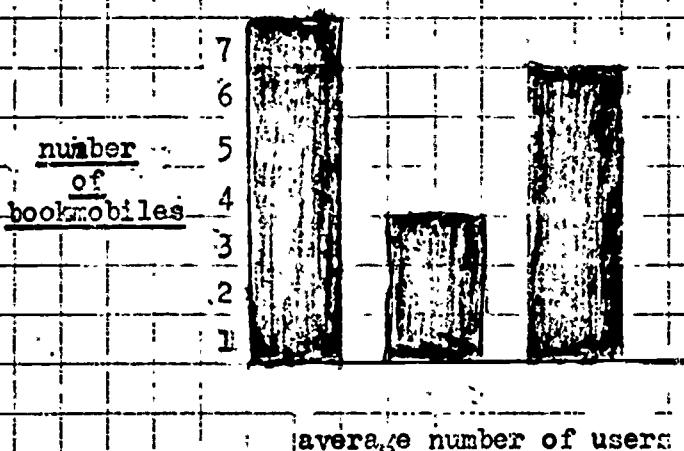
6. Average traveling time to a stop — 15 bookmobiles took 1 hr. or less; 3 took 2-4 hours.

7. Total miles covered per year:



SECTION B : Circulation and Collection

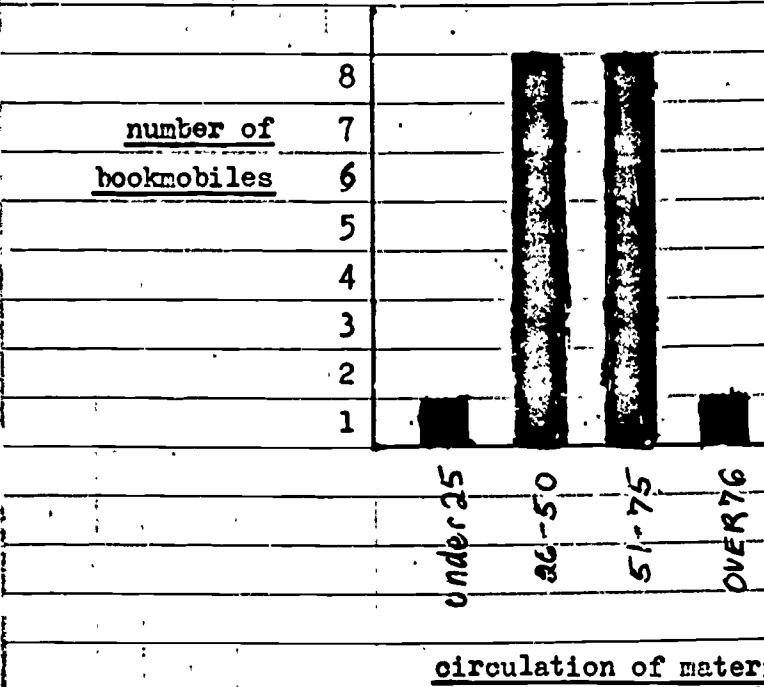
1. Average number of users served per stop:



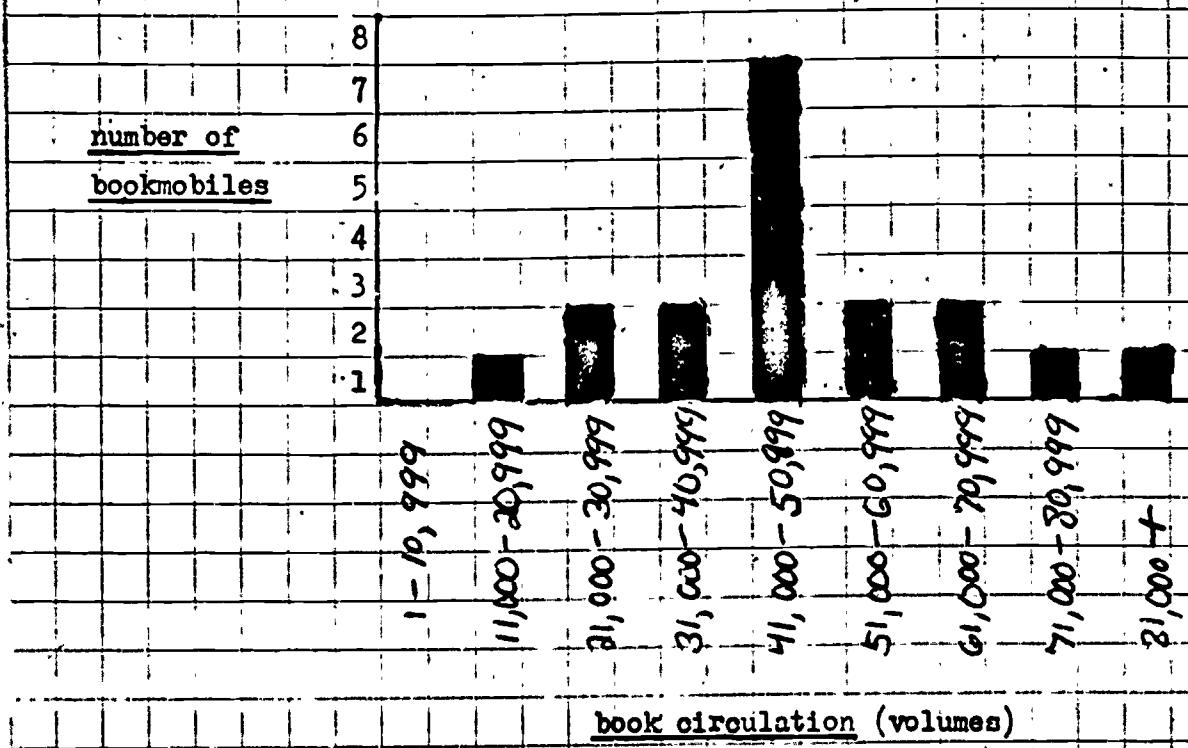
2. Was a poor question, less than half even responded. Of those that responded, 2/3 answered under 6,000 total users served per year.

SECTION B (continued)

3. Average circulation of materials per stop



4. Total circulation of materials annually



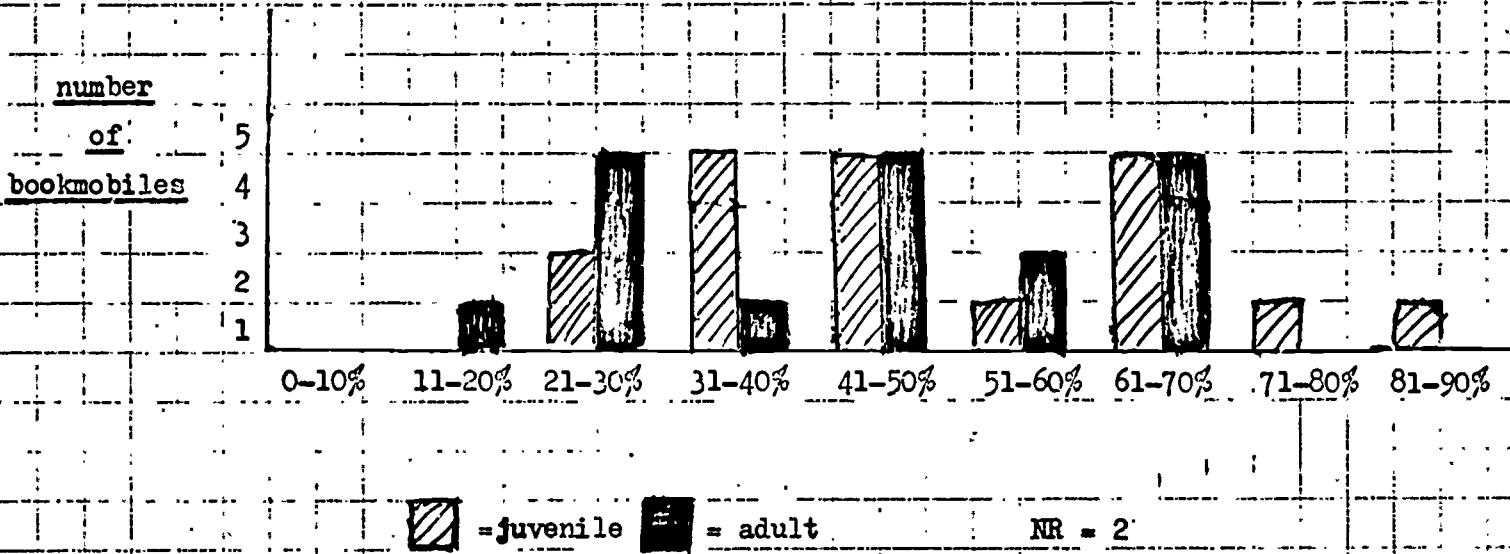
The bookmobile with 81,000 plus actually had a 118,000 total annual circulation of materials.

SECTION B (con't)

5. Number of non-book materials circulated and type — Only 50% answered that they circulated non-book materials. Of these, most circulated 500 or less per year. Periodicals and records were the types listed. One library system which had 5 bookmobiles circulated talking books, periodicals and records.

6. What percentage of circulation is juvenile and adult?

(young adult was categorized with adult)



7. All but one bookmobile stated they offered reference service! The most popular method of providing reference service was: take question back to headquarters and answer next time visit stop. The next most popular method was by mail and the third was reference books on the mobile unit. Many provided service by several methods. There were no bookmobiles which used a 2-way radio to send questions back to headquarters.

8. All the bookmobiles took requests for materials. Only one system had any restrictions. These restrictions were: only 3-5 requests were allowed per borrower and they would not supply university course materials.

9. This was a surprise response. All but two bookmobiles serviced requests from their own collection, a central collection used by more than one library unit and from inter-library loan sources. The other two bookmobiles serviced requests from their own collections and from inter-library loan sources. From this data, one can conclude they have access to a great variety of materials to service requests.

SECTION C : BUDGET

Materials Cost	Automotive Maintenance Cost	Operating Expense	Personnel Cost	Annual Total Cost	Total Circulation of Materials (volumes)	Cost per Item Circulated
1 \$ 9,000.	NA	— NA	\$ 20,000.			
2 \$ 9,000.	— NA	— NA	\$ 20,000.			
3 \$ 8,000.	\$ 5,500.	—	\$ 17,000.	\$ 30,500.	33,000	\$.92
4 \$ 8,000.	\$ 5,500.	—	\$ 17,000.	\$ 30,500.	118,000	\$.26
5 — NA	\$ 5,000.	—	\$ 16,000.			
6 \$ 5,000.	\$ 2,548.	\$ 770.	\$ 13,741.	\$ 22,059.	21,736	\$ 1.01
7 \$ 8,400.	\$ 7,573.	\$ 250.	\$ 25,215.	\$ 41,438.	50,000	\$.83
8 — NA	\$ 3,600.	— NA	\$ 13,000.			
9 — NA	\$ 3,600.	— NA	\$ 14,000.			
10 —	—	—	—			
11 — NA	\$ 2,200.	—	\$ 14,500.			
12 — NA	\$ 3,700.	\$ 151.	\$ 13,000.			
13 \$ 5,300.	\$ 2,400.	\$ 1,080.	\$ 22,564.	\$ 31,344.	48,312	\$.65
14 \$ 5,300.	\$ 1,400.	\$ 1,080.	\$ 14,304.	\$ 22,084.	41,220	\$.54
15 \$ 10,000.	\$ 3,200.	\$ 1,900.	\$ 36,100.	\$ 51,200.	35,177	\$ 1.45
16 \$ 10,000.	\$ 4,300.	\$ 1,900.	\$ 36,100.	\$ 52,300.	59,148	\$.88
17 \$ 10,000.	\$ 5,000.	\$ 1,900.	\$ 37,000.	\$ 53,900.	41,839	\$ 1.29
18 \$ 6,000.	\$ 6,746.	—	\$ 17,000.	\$ 29,746.	28,177	\$ 1.04

NA = Not Available Those with NA blanks did not divide their budgets into the 4 categories set up, or their budgets were part of other library unit budgets and could not separate out items such as materials.

The method used to gain cost-per-item circulated figures was by: dividing total circulation of materials into total annual cost per bookmobile. Only those bookmobiles which provided information in all 4 categories were used in calculating cost-per-item circulated. Bookmobiles #3 and #4 were included because they indicated that the figure for automotive maintenance costs included operating expenses. Bookmobile #10 only gave percentage figures and therefore was ruled out and given blanks.

SECTION C - Budget (con't)

Total personnel figures per bookmobiles were: 10 bookmobiles used 2 people
4 bookmobiles used 3 people
4 bookmobiles used 4 people
Some of these people were part-time.

SECTION D : EVALUATION

- What are the major objectives of your mobile service?

rank	PR	IS	SS	MM	READ	REF	
1	-	1	-	-	14	-	
2	1	7	6	-	1	-	NR = no response
3	1	6	8	-	-	-	
4	5	1	-	-	-	8	
5	3	-	-	8	-	3	
6	5	-	-	6	-	3	
NR	3	3	3	3	3	3	
total points	70	37	36	76	16	65	

Total points were calculated by multiplying the number in each category times the rank. For example in the first category PR: $1 \times 2 + 5 \times 4 + 3 \times 5 + 5 \times 6 = 67$. Those with the lowest number of total points had the highest rating.

Source of reading for user = first place
Social Service for user .. 2nd
Information Service for user .. 3rd
Reference Service for user .. 4th
Public Relations .. 5th
Multi-Media centre .. 6th

2. What is the greatest obstacle in providing mobile library service to rural areas?

Numbers of Bookmobiles	Comments
4	scattered population, difficulty in establishing stops which reach a large number of people
1	poor roads
7	reliability of unit
6	lack of public awareness of services available
2	money
3	inadequate hours of service

SECTION D : EVALUATION (con't)

3. Implementation or not of bookmobiles, books by mail or depositories operated by local users?

None even considered boatmobiles.

BIMDepositories

	I	N	C
<u>number of bookmobiles</u>	10	5	2

number of bookmobiles

	I	N	C
	7	5	5

I = implemented

N = not implemented

C = considered

IV. COST BENEFIT ANALYSIS APPLIED TO BOOK-BY-MAIL SERVICES

"Initiating bookmobile service to smaller centres, is the first step in the relationship of a books-librarians-readers service pattern. Books are being brought to the people. A mail-order service carries this concept one step further, it is designed to bring books to individuals rather than to groups of people."¹⁰

A books-by-mail (BBM) service to rural areas is a 24-hour service because selection of materials by users can be conveniently done at any hour of the day or night by simply using the published catalog. Rural BBM operations can reach the following user groups (which are not mutually exclusive):

1. elderly
2. handicapped
3. ill
4. small children
5. people in isolated areas
6. all people who use bookmobiles
7. working men and women

A books-by-mail service can provide the following services:

1. circulation of reading materials
2. complement existing library services such as bookmobiles
3. public relations for entire library

"Public relations values are exceptionally great and they alone can fully justify any and all costs for the (BBM) service".¹¹

The objectives and resultant benefits of a BBM program are less in quantity than those of a bookmobile service because of limitations of sending materials through the mails. The number and types of user groups a BBM program services can be greater than a bookmobile service, due to easy access and efficiency of mail service and the individual attention of BBM service.

A simple rural mail order service consists of the following elements: a book collection, a mailing operation & equipment, a book catalog and personnel to operate the service.

Sexton and Kim reported¹² in their BBM survey from Indiana:

"...a BBM program requires an additional collection of books (separate from rest of library) because the program increases the population served. Some of the programs are reaching as much as 50% of the unserved rural population. The rural bookmobile collection consists mostly of paperbacks which can be procured very inexpensively. Book cost can be further cut by giving minimum of cataloging and processing to paperbacks. It has been found that paperbacks can stand 3 or 4 years of heavy circulation."

I would agree that a separate collection is necessary for a BBM service and that paperbacks are more feasible because of weight costs in mailing, although hard covers could also be used. However, I would seriously question that paperbacks can withstand 3 or 4 years of heavy circulation. This could only be possible if they were rebound in library bindings. Otherwise, the many paperbacks published in perfect (glued bindings) begin to fall apart after 3 or 4 circulations. The cost of rebinding paperbacks must be considered in this type of a service.

The mailing operation of a rural BBM service can be simple. The equipment needed includes:

1. simple postage scale
2. desk stapler
3. stamps
4. frame for mail bags

"The program (without catalog) can be initiated with equipment costs of less than \$100.00."¹³

Administration of BBM service is controlled by the printed book catalog which lists what titles are in the collection. A catalog which meets the demands and anticipated demands of the users is the key to the success of the BBM service. It has been found that very few people order materials outside those listed in the catalog. In the Indiana BBM Service¹⁴, preparation and distribution of the mail catalog was found to be the third ranking cost factor among the rural BBM programs. The cost per catalog ranged from 54¢ to 20¢ (1973 costs). The larger the number of books-by-mail users, the less costly the catalog becomes. It was also noted in the Indiana study that the frequency of issue rather than the size of the catalog is the most influential in improving the service. Users also tended to choose from the catalog, titles which were prominently listed, illustrated and annotated.

As is true of bookmobile services, personnel costs becomes the largest cost factor in the BBM service. However, many rural BBM programs do not require a full-time professional to run the program. The only professional duties include: selecting books for collection as well as editing the catalog. Library technicians or clerical staff could run most of the program, therefore saving considerably in total costs.

The procedure used for bookmobiles in determining cost-per-item circulated can also be applied to BBM service. The total annual cost of the operation can be

divided by the total circulation of materials and result in an average cost per book circulated. "Data of 10 BBM services sampled showed the median cost per book circulated to be between 65¢ to 67¢".¹⁵ These figures must be used sparingly because they do not take into consideration the quality of service, the type of material mailed or the amount of use of material.

In Section IV costs and benefits of bookmobile service revealed by the questionnaire will be compared to costs and benefits of BBM service.

V. COMPARISON AND CONCLUSIONS OF BOOKMOBILE AND BOOKS-BY-MAIL SERVICES IN RURAL AREAS

The bookmobile data presented in section III will be used to compare to BBM services as discussed in section IV.

Objectives

To begin the top priority objective of the bookmobile services sampled was to provide reading material for the users. This would also be the main objective of a BBM service. Information service and social service for users were rated next. These two services are important objectives of bookmobile services which are not attained by BBM services. The bookmobile and library staff fulfill a social need in rural areas by personally visiting rural communities, getting to know the people and exchanging a variety of ideas and information with these library users. These objectives obviously are limited in a BBM program because there is no personal contact with the users unless it is by means of telephone.

Reference service could rank higher as an objective, if a bookmobile was equipped with reference books, had a 2-way radio to headquarters and/or a qualified librarian to decipher, interpret and locate answers to questions asked. Public relations objectives ranked next and can be a high priority objective in both BBM and bookmobile services depending upon how publicized the service is in rural areas via radio, newspapers, brochures and mailed announcements.

The multi-media objective ranked last, which I conclude is directly related to lack of funds or initiative to obtain non-print media for the bookmobile. (see p.12, question 5). Again, given proper funding this could be a high priority objective, providing services such as films, music at story hours and talking books.

Users Serviced

Although no user/non-user survey was initiated, generally speaking bookmobile services try to make stops in order to reach a group of users. Books-by-mail services, as stated earlier, are oriented to serving individual users, and therefore can more easily reach bed-ridden, elderly or isolated people than a bookmobile service. Because the number of times a bookmobile is able to stop at a particular location each month is limited, a BBM service rates higher because it can service users more frequently. A BBM service can also reach more working adults in rural areas than a bookmobile service because of the bookmobile's time limitations.

From the bookmobile data (see p.12, question 6) children were a higher percentage of users served compared to adults, although the bookmobiles served more adults than anticipated. As stated in Section I, public libraries in general service more children than adults. Bookmobiles as extensions of public libraries are no exception to this generalization. If reaching children in rural areas is a high priority of the public libraries, then a bookmobile service (stopping near schools) is far more adequate than a BBM service. The latter reaches more adults than children because of the ordering and mailing procedures necessary in using the BBM service. If reaching adults in rural areas is an equal or higher priority than service to children, then the use of bookmobiles should be carefully evaluated. Unless stops could be arranged at hours when adults could visit the bookmobile, a BBM service would seem to be more advantageous.

Benefits

The benefits of both services are dependent upon the objectives which were discussed on p.18. Bookmobiles are far more versatile in potential services capable of offering, than BBM services. However, because variables such as funding available, the benefits of a BBM service may outweigh those of a bookmobile service.

There are many other variables to consider for bookmobile services in rural areas which can affect the service offered. One is the capacity of the bookmobile unit. (see p.8, question 4) The most popular size unit was 2000-2500 books. Pearson's coefficient of correlation¹⁶(r) was used to measure the degree of relationship between capacity of a bookmobile and the annual circulation of materials. The relationship was very weak, r= 0.15. This means there exists a slight-

ly positive relationship between capacity and circulation of materials. Therefore, from this data it can not be concluded that a higher capacity bookmobile provides higher circulation of materials. Further studies are needed on the variables of quality, types of materials and abilities of the bookmobile staff to relay the various services to the users.

Pearson's coefficient of correlation (r) was also used to measure the annual circulation of materials and the number of stops in the winter. Again, the relationship was weak, $r = -0.037$, which means a slightly negative relationship between circulation and number of stops. So, statistically this study was unable to prove any relationship between circulation and number of stops. Variables which the questionnaire did not measure but which might prove significant were the length of stops and number of users at each stop.

"Duration of bookmobile stops is a significant factor and has a direct affect on circulation. More emphasis should be directed at selecting fewer stops for longer time-periods."¹⁷ The length of stops is a critical factor in rural bookmobile service, because of difficulty in locating stops which service more than a few people. Therefore, more stops at shorter time intervals are necessary in order to reach a sufficient number of users. However, how much reference and information service can be provided in a 15-30 minute stop in addition to the clerical duties of checking materials in and out? It seems to me that the bookmobile would only become a delivery van in these short stops, and would reduce any additional services to a bare minimum. In this situation a BEM service becomes far more efficient and effective than a bookmobile service. From the schedules that three bookmobile staffs sent in addition to their questionnaires, the longest stops (2-6 hours) were provided to schools. The latter would benefit far more from reference and information services of the bookmobile staff than a short stop of 20 minutes at a senior citizen home or 25 minutes at a jail.

The geographical limitations of rural bookmobile services have been mentioned in conjunction with other variables. Included in this variable are the poor conditions of roads in rural areas which affect the reliability of the bookmobile and keeping efficient time schedules during inclement weather. However, from the questionnaire data (see p.9, question 6) the number of stops in summer and winter did not greatly vary. Half the bookmobiles had the same number of stops

in both seasons. A books-by-mail service has no geographical limitations but could be inhibited in its distribution procedures by a mail strike.

One other important variable to consider when discussing benefits in the number of books users can check out. Most BBM services limit the number of books an individual checks out each time, to approximately 3 items. However, a bookmobile service provides an unlimited amount of checkouts per user with the exception on non-print or high-demand materials. In addition, the bookmobile user benefits by physically selecting and choosing materials, whereas the books-by-mail user is limited to what is written in the printed catalogue. The success of the BBM program is mainly dependent upon the printed catalogue. A well annotated, illustrated catalogue could be far more successful in reaching users than a poorly managed bookmobile service.

Costs

It is difficult to compare cost analysis of bookmobile operations as budgetary breakdown of items varies with every bookmobile operation. The resultant figures are only rough estimates as a detailed cost analysis would be necessary to obtain exact costs. From the bookmobile data (see p.13) the cost-per-item circulated varied from \$.26 to \$1.29. These figures do not consider the quality and kinds of services offered nor the number of users reached. A similar cost breakdown per item circulated for a books-by-mail operation in the same or similar rural areas would have to be made in order to compare the costs of the two types of services. Any comparison must always be considered in relationship to the objectives and resultant benefits of the BBM and bookmobile services. The cost factors are important in rural bookmobile services, particularly those with severe budget limitations. The number of users a bookmobile can reach or the quality of service offered may override the increase in cost of the bookmobile service in comparison to a BBM service in the same areas. However, the reverse may also hold true.

Conclusions

A bookmobile service has potential for a far greater variety and quality of services than a books-by-mail service, if the bookmobile is efficiently and effectively operated. A BBM service appears far more applicable for certain types of individual users - elderly, bed-ridden and working adults. One service need not be chosen over the other as both services can be mutually complementary.

Quality bookmobile services could be provided for users at the larger circulation stops. Many of the smaller circulation stops could be eliminated by instituting a BBM service. However, schools seem to be the highest circulation stops and would therefore be the main service areas. I would personally question the use of a public library extension service used primarily to service schools. In this situation one should seriously consider abandoning the bookmobile service and instituting a BBM service, depending of course on the priorities of the individual library.

Another alternative is depository libraries run by local users. These depositories may contain 5 to 200 books and could be located in churches or stores. A delivery van could rotate the books on a regular basis. These depositories could be open at hours convenient to the local users, and could be more beneficial than a 15-minute bookmobile stop every 2 or 3 weeks. From the questionnaire data (see p.15) over half the bookmobiles are already running in conjunction with books-by-mail services and one third have implemented depository libraries. This substantiates my previous statement that BBM services can complement a bookmobile service.

Cost-benefit analysis and user/non-user surveys are effective tools for helping librarians evaluate rural bookmobile and BBM services. The feasibility of these services can be determined with the information provided by a cost-benefit analysis and a user/non-user survey. There never exists a clear-cut position of when to implement a service and when to discontinue or not to implement a service. The final decision always remains somewhat subjective on the part of the decision-makers.

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- ³IBID, p. 63.
- ⁴Goddard, Haynes, C. "An Economic Analysis of Library Benefits", Library Quarterly, (Vol. 41, July 1971), p. 244.
- ⁵Brown, Eleanor Francis. Bookmobiles and Bookmobile Service, Metuchen New Jersey: The Scarecrow Press, 1967, p.307.
- ⁶IBID, p. 298.
- ⁷IBID, p. 313.
- ⁸1971 Census of Canada, Vol. 1, (Part 1) Population. Ottawa: Information Canada, 1974.
- ⁹IBID
- ¹⁰Waddell, Bonnie "Breaking User Boundaries or Books-by-Mail For The Atlantic Provinces", APLA Bulletin, No. 36, Winter 1972, p.94.
- ¹¹IBID, p. 95.
- ¹²Sexton, Irwin M. & Kim, Choong H. Conference on Books-by-Mail, A Report. Terre Haute, Indiana: Indiana State University, Sept. 1973, p.6.
- ¹³Waddell, Bonnie, op.cit., p. 95.
- ¹⁴Sexton, Irwin. op.cit., p. 11.
- ¹⁵IBID, p.6.
- ¹⁶Blalock, Hubert. Social Statistics. New York: McGraw Hill, 1970, p. 285.
- ¹⁷Hu, Teh-wei and Broom, Bernard H. A Benefit-Cost Analysis of Alternative Library Delivery Systems. Westport, Connecticut: Greenwood Press, 1975, p.136.

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Questionnaire on Mobile Library Service
To Rural Areas in Newfoundland
Prince Edward Island and Nova Scotia

APPENDIX A

Section A : General Statistics and Description

1. Name of Library System: _____
2. Geographical area mobile unit services? (check appropriate one)
Newfoundland _____ PEI _____ Nova Scotia _____
3. Kind of mobile unit? (check one)
a. self-powered unit _____ b. house trailer _____ c. semi-trailer _____
d. other _____
(fill in) _____
4. Year purchased? _____ Total book capacity? _____
5. Approximately, the average number of stops per week in winter? _____
in summer? _____
6. Average traveling time to a stop? (check one)
a. 1 hr. or less _____ b. 2-4 hrs. _____ c. 4-6 hrs. _____ d. 1 day or more _____
7. Total miles covered per year? _____

Section B : Circulation and Collection

1. Approximately, the average number of users served per stop? (check one)
a. under 5 _____ b. 5-10 _____ c. 10-20 _____ d. over 25 _____
2. Total number of users served per year? _____
3. Approximately, the average circulation of materials per stop? (check one)
(includes non-book materials and periodicals)
a. under 25 items _____ b. 25-50 items _____ c. 50-75 items _____ d. over 75 _____
4. Total circulation of materials per year? _____
5. Approximately, how many non-book materials do you circulate per year?
What kind do you circulate?

6. What percentage of your circulation is juvenile? _____ young adult? _____
adult? _____
7. Do you offer reference service? (check one) _____ yes _____ no
If yes, check by what means from the following: (check several if appropriate)
a. reference books on mobile unit _____
b. 2-way radio to headquarters _____
c. take question back to headquarters and answer next time visit stop _____
d. other _____
(fill in) _____

8. Do you take reserve requests for materials? (check one) yes no

If yes are there any restrictions to this service? Please list.

9. What is the collection source you use for servicing requests? (check several if

- a. your own collection _____ b. A central collection used by more than one library unit ^{appropriate} _____
c. inter-library loan sources _____

Section C : Budget

Can you determine approximately what proportion of your annual budget is spent on the following areas? (fill-in appropriate figures for one mobile unit)

1. Materials (includes books, periodicals, binding, non-print, supplies, equipment)

\$ _____

2. Automotive Maintenance (includes gas, licensing, insurance, repairs, washing, depreciation, garage, tires)

\$ _____

3. Operating Expense (includes rent, utilities, publicity etc.)

\$ _____

4. Personnel (includes staff on mobile unit and headquarters)

\$ _____

Total number of staff? _____

Section D : Evaluation

1. What are the major objectives of your mobile service? (rate according to the following priority scale: 1 = highest, 2 = high... etc. 7 = lowest)

Public relations for library system _____

Information service for user _____

Social service for rural communities _____

Traveling multi-media centre _____

Source of reading for users _____

Reference Service _____

Other _____ (fill in) _____

2. What is your greatest obstacle in providing mobile library service to rural areas?

3. Have you implemented or considered supplementing your rural bookmobile service with any of the following? (Mark I for implemented, Mark C for considered or Mark N for neither)

- a. Boatmobiles _____ b. Books by mail _____ c. Depositories operated by local users _____

4. Please write any additional comments, opinions on back.